



Echoplex Digital Pro User's Guide

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About This Manual

Typeface Conventions

Button and knob names are shown in bold, since references to them are usually about actions that you might take.

Function and Operation names are shown in a plain typeface.

Buttons generally either represent parameters or initiate actions, which we usually call *functions* or *operations*.

We use different versions of the same typeface for the button (bold) and the function (regular); e.g. "the **Record** button starts and ends Record operations."

Parameter Names and Values will be shown as italics.

Examples:

"Press the **Overdub** button."

"You can end the Record operation several ways:"

"When *MuteMode=Continuous*, the loop runs in the background even when it's silent."

Terminology

There are a few key terms that are used frequently in this manual. Here's a summary:

Play Mode: This is the condition of the Echoplex Digital Pro when you're not editing parameters or performing an operation like recording, overdubbing, inserting, etc. None of the Row Indicator Lights are lit in this condition, and the current loop simply plays back over and over.

Other Modes: These are the states that the Echoplex Digital Pro is in after you've pressed a button to initiate an action, but before you've ended the action. The mode is the name of the button that you've pressed; e.g. Record mode, Mute mode, Insert mode, etc.

Loop, Loop Length, Current Loop, Cycle: A loop is the entire program that plays when the Echoplex is in Play mode. The length of the loop is the number that is in the time display while in Play mode (the length of the recorded material), which will be less than the total length available for recording.

If the *MoreLoops* parameter is greater than one (see *MoreLoops* in the Reference chapter), then the Echoplex will hold several different loops. In this case, one loop will be active at any given time, and we'll call this the *current loop*. The leftmost digit in the display. is the number of the current loop.

When you use **Multiply** or **Insert**, a new loop is built from a number of blocks of material with identical lengths. We'll call each of these component blocks a *cycle* or, less commonly, a Beat, and continue to refer to the entire groups of cycles as a *loop*.

Resetting Loops, Empty Loops: When you reset a loop by holding down the **Record** button for a couple of seconds (or reset all loops with a long press of the **Multiply** button, if you've already reset the current loop), you completely empty it. The time display will show just a decimal point. This creates an empty loop. If *AutoRecord=On*, entering an empty loop (with the **NextLoop** button) will cause recording to start immediately.

Long Press: In many situations, a long press of a button will have a different effect than simply pressing the button and releasing it immediately (resetting a loop through a long

press of the **Record** button is the most obvious example). Although there are situations where you may want to press a button for quite a long while, any press longer than two seconds or so will count as a long press.

Immediate Action: This is a term used in the Reference chapter to describe buttons that initiate an operation as soon as you press them, in contrast to buttons that set parameters.

Chapter 1: Quick Start

Congratulations! You're in for more fun than you can possibly imagine, playing music with the Echoplex Digital Pro. This is the spiritual successor to the original Echoplex, a device made by Maestro in the 1960s that relied on tape loops to create effects. It was used extensively by the Jimi Hendrix, the Doors, and many others. Now, the temperamental tape technology that terminated the triumph of the original Echoplex has been replaced by high-fidelity, utterly consistent digital technology. Not only does this result in increased sound quality, but the flexibility afforded by programmable digital control also makes possible a much wider range of performance options.

One of the great things about the Echoplex Digital Pro is that it offers both instant gratification and depth. Once you hook it up, it will probably take you about 10 minutes to learn how to work the basic functions and start making music. After that, you may be intoxicated with power for an hour or two before you're ready to come back and learn more. The Echoplex Digital Pro will reward further study, because there are layers of refinements that will allow you to create more complex pieces with interesting variations. But, because you start making cool music from day 1, you can learn to use these refinements at your own pace, gradually adding to your bag of Echoplex tricks when you have the time and energy. We've tried to make that process as efficient for you as possible by providing you with a carefully-planned front panel, footpedal, and manual. In the next few paragraphs, you'll learn the basics of using your Echoplex Digital Pro. After you've recovered from the shocking joy of your first loops, browse through this manual at your leisure. You'll discover lots of new ideas that will keep you coming back time after time.

Make the connections

The basic connections for using the Echoplex Digital Pro are quite simple: power, audio in and out, and the optional footpedal. Follow along with the steps below, and refer to [Figure 2.1](#) and [Figure 2.3](#) for more information.

1. Check that the **Power Selector Switch** on the back of the unit is set properly for your power source--115V for US- and Japanese-style power outlets, or 230V for European-style. If it is set incorrectly, change it to the correct setting with a screwdriver.
2. Plug the Echoplex Digital Pro into a power source using the supplied power cord.
3. If you own the optional EFC-7 footpedal, connect it to the **Footpedal jack** on the back panel using a standard guitar cord with 1/4" phone plugs on each end.
4. Connect an audio source to the Echoplex's back-panel **Audio Input jack** with a

standard guitar cord, or plug a high-impedance microphone directly into the jack. The Echoplex Digital Pro can accept microphone-level, instrument-level, and line-level inputs (along with anything in-between).

5. Connect the Echoplex's **Audio Output jack** to an amplifier, mixer, or preamp to let you hear what's happening!

These are all the basic connections. See Chapter 2 for information on additional possibilities.

Turn it On

Use the power switch at the right of the Echoplex Digital Pro to turn it on. The display will briefly show the software version number and then switch to the standard display (see the section titled "Display" in Chapter 2).

Set the Levels

1. Turn the **Output** knob all the way off.
2. Turn the **Feedback Knob** all the way up. This is the best setting for most uses of the Echoplex Digital Pro. See Feedback Knob in the Reference chapter for more information.
3. The **Mix** knob lets you balance the volumes of your playing and loop playback. Set it to the half-way point (straight up) to start with.
4. Set the **Input** knob so that the LED light labeled "Input" is dark when you're not playing anything, green when you play at normal levels, and orange when you play at your loudest levels. This light will turn red if you overload the Echoplex, causing ugly digital distortion in your loops. If this happens, turn down the **Input** level.
5. Play your instrument and adjust the **Output** knob until you reach a pleasant listening volume.

Record

It's easy to record your first loop.

1. Press the **Record** button.
2. Play a few notes.
3. Press the **Record** button.

Now you should be hearing your notes loop over and over again. If you don't like what you recorded, simply repeat the steps above once again.

The **Record** function starts instantaneously when you press the **Record** button. You'll probably find that you get the best timing results if you press **Record** simultaneously with the first note or chord of your loop (as opposed to trying to press it an instant before). To end recording, press it exactly at the time when you want the loop to restart (right on the downbeat, if you're recording rhythmically). A few minutes of practice will be all that you need to create great loops with no audio or rhythmic glitches.

As you record, you'll see the length of the current recording in the display. Keep an eye on this, especially if you don't have much memory installed in your unit (see Appendix A, Memory for more details). Your maximum recording time is displayed when you first power on the Echoplex Digital Pro. If you exceed this time during recording, your loop won't be kept (with the default settings. See Overflow in the Reference chapter for other options).

If your loop seems surprisingly loud or soft in relation to what you played, adjust the Mix level and make a new recording (repeating steps 1-3 above). Keep doing this until you find the right balance.

If you want to record a new loop, simply repeat steps 1-3 above. If you want to reset (completely clear) the loop, simply press and hold the **Record** button for a couple of seconds.

For more information on recording, see Record in the Reference chapter.

Mute

If you get sick of listening to your loop, you can silence it without erasing it by pressing the **Mute** button. The light under the **Mute** button on the front panel will turn red. Press the **Mute** button a second time to hear your loop again.

For more information, see MuteMode in the Reference chapter.

Overdub

Now that you have a loop running, let's start to have some fun by overdubbing some additional sounds. It's incredibly easy.

1. Press **Overdub**. The **Overdub** light turns red.
2. Play. Each time the loop restarts, you'll hear whatever you played during the last pass added to the mix.
3. When you're done overdubbing, press **Overdub** again to stop (it's a good idea to not leave the Overdub function on when you're not actually playing).

For more information, see Overdub in the Reference chapter.

Undo

If you don't like what you've just overdubbed, you can press **Undo** to erase it. If your loop length is short compared to the amount of memory in your Echoplex, **Undo** can erase the layers of overdubs one by one. However, this capability is limited by the amount of memory that you have installed. If your loop length is longer than half your memory capacity, for instance, you won't be able to **Undo** at all.

Undo also cancels a function that you may have started by accident. After you press **Record** without meaning to, for instance, you can recover your loop simply by pressing **Undo** instead of **Record** to end the Record operation.

For more information, see Undo in the Reference chapter.

Multiply

Multiply is like **Overdub**, except that **Multiply** lets you record longer passages. For instance, you can use **Multiply** to overlay a 4-bar bass riff over two repetitions of a 2-bar chord pattern. Or, if you have enough memory, you can use **Multiply** to record a long solo over a repetitive backing track. It's a powerful function that adds a lot to your expressive capabilities using the Echoplex Digital Pro.

Here's a quick introduction to **Multiply**:

1. Record a simple, short loop.
2. Press **Multiply** and play over several repetitions of the loop.
3. Press **Multiply** again to end the recording.

Multiply doesn't restart the loop the instant you press it the second time--it always "rounds up" so that the original loop isn't cut-off in the middle.

Notice that the right-hand digit of the display counts the repetitions of your first loop as the entire loop is played back. There are a number of situations where we'll need to distinguish between these, so we'll introduce some terminology:

Key Point: The first loop, the "atom" that you started with, is called a *cycle*. We'll reserve the term loop to refer to the full loop, which can consist of several full cycles (never a fractional number of cycles, like 2-1/2). If you've just recorded a single loop and not used **Multiply** or **Insert**, then your loop will be exactly one cycle long.

Chapter 2: Front, Back and Underfoot

In this chapter we'll discuss the physical elements of the interface: the front panel, optional EFC-7 footpedal, and back panel.

The Front Panel

The front panel of the Echoplex Digital Pro contains a **Power Switch**, **Knobs** that set critical levels, two multicolored **Level Indicator Lights** to monitor levels, a 6-character **Display** that shows timing and other information, and a row of eight multi-function **Buttons** for setting parameters and operating the unit. It also contains four **Row Indicator Lights**, controlled by the **Parameter** button, that determine which set of functions or parameters correspond to the buttons. Each button has a multi-colored **Status Indicator Light**.

Level Control Knobs

The four Level Control Knobs control the input and output levels, the mix between the input signal and the looped or delayed signal, and the feedback level. The Quick Start in Chapter 1 describes how to set these levels, and you'll find more information in the entries for **Input knob**, **Output knob**, **Mix knob**, and **Feedback Knob** in the Reference chapter.

Level Indicator Lights

These multicolored lights monitor audio levels. The **Input Indicator** monitors the levels that are received at the audio input jack on the back panel, while the **Feedbk Indicator** monitors the volume of the material that is recorded in the current loop.

When one of these lights is dark, it is measuring very little (or no) signal. When it is green, the signal is healthy. Orange indicators are fine too, with the signal at a good level. The orange color indicates that caution should be displayed, however, because the levels are approaching the red zone. Levels that cause the indicator lights to glow red will cause distortion.

You can't do much about controlling the level already in the loop, except to lower the feedback, to **Undo** recent actions, or to reset the loop. However, you can and should control the input level as follows:

Key Point: Set the **Input knob** so that the loudest signals make the **Input Indicator Light** turn orange. It should *never* turn red.

Display

The Echoplex display conveys some critical information in a compact manner, as the [illustration](#) shows.

The time display takes on different roles according to the context. When you first power on the Echoplex, it will show the amount of time available in the current loop (if *MoreLoops=1*, it will show the total time available, reflecting the amount of memory installed in the unit). When you're in Record, **Multiply**, or Insert operations, the time display will keep track of how much time you've recorded so far. Once something has been recorded into a loop, the time display will show the length of the current loop. And, once you've reset a loop, the time display will be blank until you record some material in the loop.

The rightmost dot flashes at the beginning of each loop. See StartPoint in the Reference chapter for a discussion of its significance and how to reposition the loop beginning. The dot next to it flashes during sync operations when *Sync* is on. See the discussion of Sync in the Reference chapter for more information.

Buttons and Row Indicator Lights

Play Mode and the Row Indicator Lights: The row of 8 buttons on the right side of the Echoplex Digital Pro control most operations. The leftmost button, labeled **Parameters** alters the meaning of the other buttons. When none of the *Row Indicator Lights* to the left

of the *function grid* (the printed names of all the functions, arranged in a 4x8 grid under the buttons) are lit, then all buttons perform their primary functions: **Record**, **Overdub**, **Multiply**, etc. This state is what we call Play Mode, and is probably where you'll spend the most time while performing. Pressing the **Parameter** button several times selects each row in turn, lighting the corresponding indicator light.

When a row indicator light is lit, then the buttons (other than **Parameters**) take on the meanings written in that row of the grid. For instance, when the **Loops** light is on, the **Record** button no longer performs the Record function; instead, it finds a convenient phone booth and changes into the **MoreLoops** button, able to increase the number of loops with a single push. When we refer to this in the text, we'll utilize both button names; for example, "Press the **Record (MoreLoops)** button."

The Persistence of Memory: All changes to parameters are active as soon as you make them, and they're stored into permanent memory when you choose a different parameter or press the **Parameter** button.

Key Point: If you shut off the Echoplex Digital Pro and restart it, all your saved parameters will remain the same (although you will lose any music that you have in your loops).

You can reset all parameters to their factory defaults by holding down the **Parameters** button when you power up.

Status Indicator Lights

As you take the Echoplex through its paces, you'll discover that the lights directly under the front-panel buttons change. Here are the meanings of these lights, valid whenever you're in Play mode (none of the Row Indicator Lights lit):

Unlit: the function is unavailable.

Green: the button is ready to perform its usual function.

Orange: the button is available, but will perform a function other than its usual one--one that's especially appropriate to the current activity or state of the instrument.

Red: the button was the last pressed and is the most likely candidate to end the function that it started.

The EFC-7 FootPedal

The buttons on the optional EFC-7 footpedal perform exactly the same function as the buttons on the Echoplex Digital Pro's front panel. Anytime that this manual refers to "the **Record** button," either the front-panel button or the footswitch can be used.

The only button missing on the footcontroller is the Parameters button, which takes you out of Play mode and lets you edit parameters. We felt that it would be inappropriate to put this button on the footcontroller, as it might take you to an unexpected place if pressed accidentally during a performance. If you are electro-mechanically adept and wish to build a footpedal incorporating this button, you can obtain instructions in how to do so by

contacting Oberheim technical support at the number in the front of this manual.

The Back Panel

The [back panel](#) contains all the jacks for connecting the Echoplex Digital Pro to the rest of the world.

Audio Connections

The Echoplex Digital Pro can accept a wide range of audio signals as input, and it outputs a line-level signal that can be attenuated by the **Output** knob (or MIDI Control Change messages). This makes it fit easily into a number of audio configurations, such as:

- Plug a guitar, keyboard, or high-impedance microphone directly into the Echoplex and plug the output into any amplifier or preamplifier.
- Put the Echoplex in the effects loop of your favorite amplifier or effects device.
- Plug the final output of your favorite effects device directly into the Echoplex and plug the Echoplex output into any amplifier or preamplifier.
- Connect the Echoplex to the Effects (Aux) Send and Return of your mixer.
- Connect a pair of Echoplexes to loop stereo signals. Refer to the "Stereo" section later in this chapter.

MIDI Connections

The standard MIDI In, Out and Thru ports are described in detail under the MIDI Ports heading in the Reference chapter. A wide range of MIDI functions are available to you. These are summarized at the start of Chapter 3.

Footswitch Jacks

Feedback: 1/4" jack that connects to the output of a passive volume pedal (one that doesn't require power) with a standard guitar cord. This connector doesn't work with all pedals, but it will work with many, including the popular Boss FV-50. Call Oberheim if you are in doubt about whether a particular pedal will work (or test it, if it's convenient).

Overdub: A 1/4" mono phone jack for attaching a momentary switch. This is useful if you don't own the EFC-7 footpedal or if you prefer to use a different style of footswitch (one with a different feel, like a sustain pedal modeled after a piano pedal). This would be especially appropriate for if you like to play with *OverdubMode=On*

Footpedal: A 1/4" mono phone jack that connects to the optional EFC-7 footpedal with a standard guitar cord. This jack also accepts a momentary switch to execute the Record function.

Sync Jacks

These jacks are used to synchronize to external sync pulses or to synchronize multiple Echoplexes. **The BeatSync** jack takes 1/4 mono cord, while **Brother Sync** uses a 1/4"

stereo cable. See the Reference chapter entries for BeatSync and BrotherSync for more information.

Voltage Selector Switch

The Echoplex Digital Pro can operate on US-style 115V power, Japanese-style 100V power, and on European-style 230V power. All that's required is that the **Voltage Selector Switch** be set properly and the proper power cord be attached to the **Power Input Jack**.

Power Input Jack

Use a power cord to connect this to a wall socket after checking that the Voltage Selector Switch is set properly.

Stereo Operation

You can use a pair of Echoplex Digital Pros to loop stereo signals. A BrotherSync connection will ensure that the two halves of the signal maintain their phase relationships through loops of any length. A MIDI connection provides simultaneous control over the process. [Figure 2.4](#) shows the way to create a seamless connection. The values of all parameters in the MIDI row of the function grid should be set identically in both units.

Chapter 3: MIDI

There are a number of different ways that MIDI interacts with the Echoplex Digital Pro. These are:

- Loops can be dumped to sequencers and samplers, and loaded from these devices, without any loss of sound quality (see the Dump and Load entries in the Reference chapter).
 - MIDI Note On messages can be used to trigger loops (see the LoopTrig and SamplerStyle entries in the Reference chapter).
 - MIDI clocks can be used to synchronize the cycle time with drum machines and sequencers (see the Sync entry in the Reference chapter).
 - MIDI Continuous Controllers can be used to control Volume and Feedback levels (see the VolumeCont and FeedBkCont entries in the Reference chapter).
 - You can control all front-panel operations with Note On or Control Change messages (see the ControlSource entry in the Reference chapter).
 - One Echoplex can control numerous others by connecting the **MIDI Out** port of each one to the **MIDI In** port of the next, as in the [figure](#). Be careful not to complete the circle and make a closed loop.
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Credits

- Written By Warren Sirota
- Layout & Design By WS Designs
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- Echoplex Digital Pro Designed By Matthias Grob, with major contributions from Kim Flint, Mark Leas, Keith McMillen, and Eric Obermuhlner
- Special thanks to the staff of G-WIZ Labs and all who have contributed their thoughts and ideas throughout this project.

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